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WASHINGTON LETTER.

JUNE 15, 1891.

RESULTS OF THE CENSUS.—In the division of Mines and Mining of the Census Bureau some important features are developed in connection with several mining industries. The production of mica, for instance, is not at present a profitable industry in the United States. The capital invested ($691,550) yielded in 1889 less than $52,450 (at a cost of $58,335); a decrease of $313,525 since 1884. In the former year the price of cut mica was $2.50 per lb.; in the latter year about $1.00 per lb. The yield fell off chiefly because the demand changed from large to small sheets. The production of the latter description not being found profitable, many miners ceased operations, and consumers were compelled to look to foreign sources for supplies. The foreign supply, after gaining a foothold in American markets, more than held its own, and as its tendency has always been towards a reduction in prices, there has been little inducement for the outlay of domestic capital. Unmanufactured mica was imported into the United States in 1889 to the value of $97,351, nearly double the value of our own product. New Hampshire and North Carolina are the only localities in which the industry assumes any importance. Aside from the well-known use of sheet mica in stove panelling, it has of late years become important in the manufacture of electrical apparatus. Ground mica is used in the manufacture of a lubricant for journals and heavy bearings generally. It is also used in fancy grades of wall paper. In fact there is a greater range for the use of ground mica than for the mineral in sheets, with a probability that its use will be widely extended whenever mechanical genius has overcome some of the difficulties in grinding.

The production of native manganese ores increased from 4,895 tons in 1881 to 34,524 tons in 1887, since which it has declined to 23,927 tons (1889). More of the product is taken from the State of Virginia than from all the rest of the United States, and it is probably fair to say that the deposits of that State have produced more than any other mine in the world.

Petroleum was produced in eleven States in 1889, but of these Pennsylvania and New York yielded nearly nine tenths of the whole amount. Nearly the entire amount produced in California, Indiana and Ohio was used for fuel, while nearly the entire amount produced in Colorado, New York, Pennsylvania and West Virginia was used for illuminating purposes.

In studying the results of the last census one does not meet with so many surprises, if obvious causes are taken into the account. It is not difficult to understand, for instance, why the distinctive rural counties of New Jersey, such as Sussex and Hunterdon, show decreases in population, while Atlantic, Hudson, Passaic, Middlesex and Mercer, counties with urban populations, show increases varying from 92 to 138 per cent. The same is true of Connecticut, where by far the largest increase has been in the urban counties, such as Fair-field, New Haven and Hartford, although the percentage of increase in this State is much smaller than in New Jersey. In the State of Maine the decrease of rural population was so great that although, in the ten counties containing cities, the increases ranged from 7 to 50 per cent., the total population of the State increased but 1.87 per cent. Seven out of the sixteen counties show positive decreases.

Here are some of the results in these three States :

	1890.	1880.	PER CENT.
Newark, New Jersey....	181,830	136,508	33.20
Jersey City, "	163,003	120,722	35.02
Paterson, "	78,347	51,031	53.53
Camden, "	58,313	41,659	39.98
Trenton, "	57,458	29,910	92.10
Hoboken, "	43,648	30,999	40.80
Elizabeth, "	37,764	28,229	33.78
Bayonne, "	19,033	9,372	103.08
Orange, "	18,844	13,207	42.68
Atlantic City, "	13,055	5,477	138.36
Passaic, "	13,028	6,532	99.45
Perth Amboy, "	9,512	4,808	97.84
Morristown, "	8,156	5,418	50.54
Bridgeport, Connecticut....	48,866	27,643	76.78
New Haven, "	81,298	62,882	29.29
Hartford, "	53,230	42,015	26.69
Waterbury, "	28,646	17,806	60.88
Meriden, "	21,652	15,540	39.33
Norwalk, "	17,747	13,956	27.16
Norwich, "	16,156	15,112	6.91
New London, "	13,577	10,537	30.56
Portland, Me.........................	36,425	33,810	7.73
Lewiston, "	21,701	19,083	13.72
Bangor, "	19,103	16,856	13.33
Biddeford, "	14.443	12,651	14.16
Augusta, "	10,527	8,665	21.49
Waterville, "	7,107	4.672	52.12
Belfast, "	5,294	5,308	....

GEOGRAPHY AND THE CENSUS.—Mr. Henry Gannett, the geographer of the Census, has evolved a good piece of physical geography which might well be familiarized. He makes subdivisions of the country into areas differing in the character of their surface, their products and their climate. The subdivisions, beginning at the Atlantic coast are, in the order named :

Coast Swamps,
Atlantic Plain,
Piedmont Region,
New England Hills,
Appalachian Mountain Region,
Cumberland-Allegheny Plateau,
Interior Timbered Region,
Lake Region,
Ozark Mountain Region,
Alluvial Region of the Mississippi.
Prairie Region,
Great Plains,
North Rocky Mountain,
South Rocky Mountain,
Plateau Regions,
Basin Regions,
Columbian Mesas,
Sierra Nevada,
Pacific Valley,
Cascade Range,
Coast Ranges.

The characteristics of the divisions are briefly these :

The Coast Swamps are found along the South Atlantic and Gulf coasts, extending inland to varying distances, in some places as much as a hundred miles. Their greatest breadth is in North Carolina and Louisiana, but they border nearly the whole coast from southeast Virginia to the Rio Grande in Texas. The population is mainly of the colored race.

The Atlantic Plain is a strip lying between the coast swamps and the fall line throughout the Atlantic States south of New York, and the Gulf States as far as the Mississippi. The surface is level, and the elevation scarcely reaches 200 ft. above the sea. Largely covered with fine forests. Underlaid by recent sedimentary rocks.

The Piedmont Region extends from Maine to Alabama, between the fall line on the east, and the Blue

Ridge on the west. Forested with a mixed growth, and underlaid by metamorphic rocks.

The NEW ENGLAND HILLS include the hill country in the upper part of New England, and the Adirondacks of New York. Elevation from one to six thousand feet. Covered with forests.

The APPALACHIAN MOUNTAIN REGION extends from New Jersey to Alabama, and includes the Blue Ridge and the Appalachian valley north and west of it.

The CUMBERLAND-ALLEGHENY PLATEAU is the escarpment-region which rises from the northwest border of the Appalachian valley, extending more or less continuously from northeastern Pennsylvania down to Maryland, Virginia, and Tennessee into Alabama. This plateau is deeply scored by streams with a general northwesterly direction. The streams have cut the plateau into a mass of very irregular ridges and gorges, making it one of the most intricate mountain regions on the globe. The whole region is densely covered with forests.

Southern Ohio and Indiana, the western half of Kentucky and Tennessee, and the northeastern part of Mississippi, with small areas in adjoining States, comprise the INTERIOR TIMBERED REGION.

A narrow strip of country bordering on the great lakes has been segregated under the name of LAKE REGION. It includes small parts of New York, Pennsylvania and Ohio, and most of Michigan, Wisconsin and northern Minnesota. This region has many of the characteristics of a coast climate.

The OZARK MOUNTAIN REGION is located in northwest Arkansas, southwest Missouri, and the eastern part of Indian Territory.

From Cairo, at the mouth of the Ohio to the coast swamps in Louisiana, including parts of Missouri, Arkansas, Mississippi and Louisiana with small areas in Kentucky and Tennessee, extends the ALLUVIAL REGION OF THE MISSISSIPPI. Most of it is marshy, and below the level of the river waters. The dry land is mainly along the immediate banks of the streams. Inhabited mostly by the colored race.

The PRAIRIE REGION comprises a small portion of western Indiana, most of Illinois and Iowa, southern Wisconsin and Minnesota, northern Missouri, eastern Dakota, Kansas and Nebraska, and a broad belt through Indian Territory and Texas. It is the granary of the country, and merges on the west into the GREAT PLAINS which extend from approximate Longitude 99° to the foot of the Rocky Mountains and from Canada to the Rio Grande. In this latter region the rainfall is insufficient for the needs of agriculture.

The CORDILLERAN REGION and ROCKY MOUNTAIN REGION (North and South Rocky Mountains) are located in Washington, Oregon, California, Nevada, Arizona, Idaho, Montana, Wyoming, Colorado, New Mexico. The climate in some parts is very arid, and in other parts very moist. The prevalence of forests accompanies the rainfall. In some sections the forests are very dense, and the trees of enormous size.

The region of great PLATEAUS, whose surfaces are level or slightly inclined, and terminate in great lines of cliffs in some cases thousands of feet in height, is located in the drainage basins of the Colorado, above the mouth of the Virgin River in southern Nevada. These plateaus descend from the mountains by a succession of gigantic steps from an elevation of 12,000 feet down to one or two thousand feet above the sea. Every stream is in a cañon. The higher plateaus are green, the lower are absolutely sterile.

The BASIN REGION, which has no drainage to the sea, is in the interior of the Cordilleran region already described, and comprises practically all of Nevada, western Utah, part of eastern California, and southern Oregon. It is a closed basin, and only discharges its waters by sinking them into the thirsty soil, or by evaporation. The rainfall is so scanty that there are but two or three running streams of any magnitude within it. In the eastern part the largest basin is that known as the Great Salt Lake. In the western part the principal basin is that of the Humboldt River. The elevation of the floor of the basin ranges from 6,000 feet near its middle line, downward, reaching in *Death Valley* in eastern California an elevation of 200 feet below the level of the sea.

The drainage basin of the Snake River in Idaho, Oregon and Washington, together with a part of the basin of the Columbia in the latter State, has been in great part caused by eruptions of basalt, which, bursting out of the soil at various points, has spread over the country, forming table-lands, which are named the COLUMBIAN MESAS.

Separating the Great Basin from the California valley in eastern California, is a broad, heavy forest-covered range of mountains with long slopes to the west and an abrupt ascent to the east,—the SIERRA NEVADA.

The PACIFIC VALLEY, so-called, is west of the Cascade range and the Sierra Nevada, and stretches from Puget Sound to southern California. It is drained in Oregon by the Willamette and in California by the Sacramento and San Joaquin rivers.

Stretching northward in line with the Sierra Nevada, but distinguished sharply from it by the high character of its formation is the CASCADE RANGE. It is a series of extinct volcanoes, rising from a high plateau of volcanic rock.

Separating the Pacific valley from the Pacific is a succession of ranges trending parallel with the coast and known as the COAST RANGES.. In southern California the valleys among these ranges are of the highest degree of fertility, and produce grapes and tropical fruits in profusion.

Mr. Gannett has prepared a table showing the distribution of population in 1870, 1880, and 1890 in accordance with these topographic features. Grouping the subdivisions, the table shows that 4.3 per cent. of the population is found in the swamp regions, including in that term the coast marshes and the alluvial region of the Mississippi River;—mainly the colored race. In the desert and semi-desert regions 2.3 per cent. In the mountain region of the west about 2.5 per cent., while the eastern mountain region contains about one-sixth of the entire population.

Another table prepared by Mr. Gannett shows the population of the country by square degrees, that is to say, by areas included between consecutive parallels and consecutive meridians. The square degrees between latitudes 39° and 43° and longitudes 71° and 76° contain about one-tenth of the population.

In two of the Census bulletins (Nos. 35 and 60) treating of irrigation in Arizona and New Mexico, the natural features of these territories are detailed with minuteness, including descriptions of the counties, courses of rivers and streams, elevations, etc. Mr. F. H. Newell is charged with the preparation of these papers.

REVISION OF GEOGRAPHIC NAMES.—In his last annual report the Hydrographer of the Navy Department, in speaking of the desirability of a uniform system of spelling geographic names in charts and sailing directions, said: "A board has been for some months investigating the subject with a view to such modifications of the Admiralty system as will render it appropriate for adoption, or, at its discretion, to report an original method, if necessary. For some time we have been in communication with all foreign hydrographers, examining into their methods, and much valuable information has been received, and it is hoped that the results arrived at will soon be ready for publication."

The board, which was organized in February, 1890, consisted of Lieut. Charles M. McCarteney, U. S. N., Chief of Division of Sailing Directions; Mr. Boynton Leach, Assistant, the editor of *Notices to Mariners*, and Mr. Gustave Herrle, Chief draughtsman.

The report of this Board (Hydrographic Office Publication No. 98) has just been published for the consideration of the United States Board on Geographic Names.

In order to learn the uses prevailing in foreign countries, a circular letter was addressed to hydrographic offices, and to various geographic societies and individuals. Replies were received from the hydrographers of Great Britain, France, Spain, Chile, Netherlands, Netherlands-India, Italy, Japan, the Secretary of the German Marine, the Marine Department of Ottawa, the Coast Pilot Bureau of Austria-Hungary, the Archive of Sea Charts of Denmark, the Inspector-General of the Imperial Chinese Customs Service, the United States Ministers to Greece and Mexico, and several others. This correspondence, which is published with the report, will be of great use in determining the correct usage of foreign geographic names, and, where other than Roman characters are used, what are the proper equivalents for transliteration.

Efforts have been made to eradicate the existing confusion by the adoption of fixed systems of orthography on the part of the hydrographic offices of Great Britain, France and Germany. The British system was adopted in 1885 by both the Hydrographic Office and by the Royal Geographical Society. M. Bouquet de la Grye, in behalf of a commission appointed by the Société de Géographie, reported in 1886 a system largely formulated after the British, and the German Hydrographic Office adopted rules in 1888 which also closely follow the British system.

An examination of these three systems discloses the fact that they divide all geographic names into two classes, on the following propositions: 1. Geographic names originating in languages that are written in Roman character should be spelled as in the country having jurisdiction. The French and German systems allow exceptions to this rule in the case of names which, through long custom, have become generally known in another form. 2. Geographic names originating in languages without literature, and in languages that require transliteration into Roman character, should have their spelling based on the true sound of the word, as locally pronounced. In regard to the phonetic values of the letters in names of the second class, the report says that the three systems show a remarkable agreement resulting from the adoption by the British of the Italian or continental vowel sounds, and from the adoption to a very large extent of the English consonantal sounds by the French and German Hydrographic Offices. All three systems, however, permit exceptions in names of class 2, where long used orthography, though it may not be in accordance with adopted rules, has become generally familiar. The three systems also recognize the futility of providing for the more delicate inflections of sound and accents in foreign names of class 2, by discarding diacritical signs, the British and German systems confining themselves to the use of the acute accent, and the French retaining only the circumflex accent (^) and the apostrophe ('). The American system, as will be noticed further on, also discards, or at least says it is desirable to avoid, the use of diacritical characters.

As far as is known, none of the other hydrographic offices have as yet any fixed system of orthography in use, unless Spain is excepted, whose Hydrographer has outlined a system, based mainly on that of the French, which is intended to be adhered to in future Spanish Hydrographic Office publications.

The Report says: "The difficulties in the way of practical application of these systems are various and many, and not the least is the uncertainty existing in regard to the correct local pronunciation of many of the names in distant foreign lands, that use another than the Roman character in their writing. Where the local pronunciation of the name is absolutely known, it may be readily spelled under the general system, but where the written form only is available, detailed systems in harmony with the general system can be advantageously used for transliterating and thus assist in bringing about the ultimate object. The Board has prepared such systems for application to Russian, Greek, Japanese and Korean geographic names, and has formulated rules and data, as far as possible, for guidance in treating Malay and Chinese names."

In regard to the names of India the Board recommends a close adherence to the forms found in Hunter's Imperial Gazetteer of India, the best authority available. The Board submits the following

STANDARD RULES.

(a) The more prominent geographic names, the orthography of which is already fixed by universal adherence to a certain form, or which are spelled in *but one way* in American and English literature, shall not be changed, although their spelling may not be in accordance with rules (b) and (c). Examples : Athens, Bombay, Ceylon, Germany, Spain, St. Petersburg.

(b) Geographic names in countries which use the Roman or Gothic characters in writing their language shall be rendered in the form found in the latest official publications, maps and books of the country having jurisdiction. In cases, however, where the form of a place-name hitherto used is so different from the official form that the identity of the latter with the former might not be recognized, the old form shall be added in brackets; as, for instance, Livorno (Leghorn), s'Gravenhage (The Hague), Wien (Vienna).

Where there is a conflict of jurisdiction, as it were, over a geographic name as, for instance, in the name of a body of water separating two or more countries, or as in Polynesian or African names, rule (a) or (c) shall be applied. Thus, Swedish and Norwegian *Skagerak*, Danish *Skagerrak* is an example where choice lies only in the spelling, and under rule (a) preference is given to double r, Skagerrak; but in the Baltic (*Baltiskoe More*, *Baltisches Meer*, *Ostsee*, *Östersjön*, **Óstersóen*) the choice lies first in the proper name, and Baltic is retained under rule (a), while the Dutch, Spanish or other rendering of Polynesian names must be treated under rule (c) if not in accord with the general system.

(c) Geographic names from languages that require transliteration into Roman character, and geographic names originating in languages without literature, shail have their spelling based on the true sound of the word as locally pronounced, and in accordance with the general system of sound equivalents given below.

On account of the difficulties inherent in the English language, an approximation to the true sound is alone aimed at in this system, the principal characteristic of which is that all vowels are pronounced as on the continent of Europe generally, and all consonants as in English:

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* The accented *ó* represents the last letter in the Danish alphabet.

Letters.	*Sounds.*	*Example.*
a	ah, a as in father	Java, Banána, Somáli, Bari.
e	eh, e as in men	Tel el Kebír, Oléleh, Medina, Levuka, Peru.
i	English e; i as in ravine; the sound of ee in beet. Thus, not Feejee, but	Fiji, Hindi.
o	o as in mote	Tokyo.
u	long u as in flute; double o, as in boot. Thus, not Zooloo, but	Zulu, Sumatra.
	All vowels are shortened in sound by doubling the following consonant	Yarra, Tanna, Jidda.
	Doubling of a vowel is only necessary where there is a distinct repetition of the single sound	Nuulua.
ö	German ö (œ)	Töchön.
ü	The French sound of u (ü); or the German ü (ue)	Bökrüt.
ai	English i as in ice	Shanghai.
au	ow as in how. Thus, not Foochow, but	Fuchau.
ao	is slightly different from above	Nanao.
ei	is the sound of the two Italian vowels; but is frequently slurred over, when it is scarcely to be distinguished from ey in the English they	Beirút, Beilúl.
b	English b.	
c	is always soft and nearly the sound of s; the hard c is given by k	Celébes.
ch	is always soft, as in church	Chingchin.
d	English d.	
f	English f; ph should not be used for the sound of f. Thus, not Haiphong, but	Haifong, Nafa.
g	is always hard (soft g is given by j)	Galápagos.
h	is always pronounced when inserted.	
j	English j. Dj should never be put for this sound	Japan, Jinchuen.
k	English k. It should always be put for the hard c. Thus, not Corea, but	Korea.
kh	the Oriental guttural	Khan.
gh	is another guttural, as in the Turkish	Dagh, Ghazi.
l m n	as in English.	
ng	has two slightly different sounds, as in finger, singer.	
p	as in English.	
q	should never be employed; qu is given by kw	Kwangtung.
r s t v w x	as in English	Sawákin.
y	is always a consonant; as in yard (Kikuyu), and therefore should not be used for the vowel i. Thus, not Mikindány, but	Mikindáni.
z	English z	Zulu.
	Accents should not generally be used, but where there is a very decided, emphatic syllable or stress which affects the sound of the word it should be marked by an acute accent.	Tongatábu, Galápagos, Paláwan, Saráwak.

The above system of sound equivalents is substantially the same as that adopted by the United States Board on Geographic Names which was organized in April, 1890, and formally created by an Executive order September 4, same year. Let it not be misunderstood that there are two boards on geographic names. This report of the board of the Hydrographic office has been published for the consideration of the U. S. Board on Geographic Names, to which it has been submitted. All the chart and map producing countries are now practically in accord in their rules for geographical nomenclature.

The United States Board of Geographic Names having recently formulated additional guiding principles determining the official form or rendering of geographic names, the whole are here introduced as a matter of general interest.

1. That spelling and pronunciation which is sanctioned by local usage should in general be adopted.

2. Where names have been changed or corrupted, and such changes or corruptions have become established by local usage, it is not in general advisable to attempt to restore the original form.

3. In cases where what was evidently originally the same word appears with various spellings sanctioned by local usage, when applied to different features, these various spellings should be regarded as in effect different names, and as a rule it is inadvisable to attempt to produce uniformity.

4. Where a choice is offered between two or more names for the same place or locality, all sanctioned by local usage, that which is most appropriate and euphonious should be adopted.

5. The possessive form should be avoided whenever it can be done without destroying the euphony of the name or changing its descriptive application.

6. In all names ending in *burgh* the final *h* should be dropped.

7. In all names ending in *borough* this termination should be abbreviated to *boro.*

8. The word *center* as part of the name should be spelled *center* and not *centre.*

9. The use of hyphens in connecting parts of compound names should be discontinued.

10. The letters C. H. (Court House) as part of the names of county seats should be omitted.

11. In the case of compound names consisting of more than one word it is desirable to simplify them by uniting the compound parts.

12. It is desirable to avoid the use of diacritical characters.

13. It is desirable to avoid the use of the words *city* or *town* as a part of names.

The last eight are recent conclusions, and are important.

The Board has issued its second Bulletin containing 204 revisions of American, and 39 of foreign names. Number three will contain a corrected list of light-houses and light-house stations; and number four a list of all counties in the United States.

Lieut. Richardson Clover, the Secretary of the Board, who has been acting Hydrographer of the Navy Department since September last, has been appointed Hydrographer in fact and promoted to the grade of Lieutenant Commander.

The Hydrographic Office will soon publish a Track and Distance Chart of the World. Also, the report of observations recently made for magnetic declination, dip, and intensity, by Lieutenants Norris and Laird, and Ensigns Holcomb, L. M. Garrett, Wilson and Wood. They furnish valuable results at Vera Cruz, Coatzacoalcos, Salina Cruz, Puerto Plata, Curaçoa, and La Guayra.

The last two issues of the Pilot Chart of the North Atlantic (May and June) contain graphic daily record of the magnetic declination, or variation of the compass at Washington. The curves indicate the true direction in which the magnetic needle at the Naval Observatory pointed during each instant from noon, March 29, to noon, May 31. It is proposed to continue the publication of these curves for at least three months, and any questions regarding them will receive immediate consideration and reply. They are carefully copied and reduced one-quarter from the photographic record at the U. S. Naval Observatory. The magnetic work is in charge of Ensign J. A. Hoogewerff, U. S. N.

The current year is the eighth in the publication of the Pilot Chart, the first issue having appeared in December, 1883. The various changes and improvements that have been made in the Chart since that time are strikingly shown by a comparison between a late copy and that first issued. The most conspicuous additions are the following: Steam and sailing routes; region of equatorial rains; table of barometer normals and percentage of probable calms for each 5°-square; storm diagrams, with brief rules for action to avoid a hurricane; cautionary and storm signals in use along the Atlantic and Gulf coasts of the United States; the tracks, names and dates of derelicts; list of dangerous obstructions to navigation along the coast, and of charts published and cancelled during the preceding month; regions of observed and predicted fog. Besides these additions, and other less striking ones, the greater portion of the forecast meteorologic data have been thoroughly revised and brought up to date, while the review is now prepared with very much greater accuracy and completeness, owing to the far greater number of observers who now send in regular reports and the hearty approbation and support received from masters of vessels of every nationality.

A feature of the Pilot Chart that deserves special mention is the occasional publication of a Supplement devoted to some subject of immediate importance. This plan was first tried in September, 1887, and since that time eight supplements have been issued, each of which has attracted much favorable attention, and has been widely quoted. The following is a complete list of those published thus far:

September, 1887.—West Indian Hurricanes. Diagrams and text explaining the circulation of the wind in a hurricane, with brief rules for action.

December, 1887.—Trans-Atlantic Steamship Routes for December. The plan for steamer-routes recommended in order to avoid collisions, with a brief discussion of the winter storm-belt of the North Atlantic.

March, 1888.—Waterspouts off the Atlantic Coast of the United States during January and February, 1888. Positions of waterspouts plotted on a small chart, with reports quoted in full and a discussion of the subject.

August, 1888.—Derelicts and Wreckage in the North Atlantic. A history of the great log-raft, with a complete list of reports received from vessels that sighted the logs as they spread over the ocean, together with a graphic record of the drifts of the most notable derelicts.

February, 1889.—The Derelict American schooner *W. L. White.* An account of the transatlantic voyage of this notable derelict vessel, with all reports received and a chart showing the track of the vessel and the general drift of Atlantic currents.

October, 1889.—The St. Thomas-Hatteras Hurricane of Sept. 3–12, 1889. Ten small charts, with accompanying text, illustrating the progress of this great hurricane from St. Thomas to our coast north of Hatteras, with a complete list of vessels from which reports were received in time for use in this connection.

During 1890, no supplements were issued, but a large number of reprints, in black and white, were made of the various diagrams and printed matter accompanying the Chart. These have been widely circulated and republished.

January, 1891.—Ice in the North Atlantic during the season of 1889–90. This chart shows the positions and dates of icebergs and field-ice reported during the past season (perhaps the most notable ice season on record).

DR. JOHN B. HAMILTON.—The Government loses the services of a valuable officer in the resignation of Dr. Hamilton, until lately supervising surgeon-general of the Marine Hospital service. Dr. Hamilton is a gentleman of many accomplishments, and possesses moreover executive abilities of a very high order. He leaves the impress of intelligent and conscientious work on the department over which he has presided since 1875. The high position of this service is recognized everywhere; and to no one is this due more than to its late executive officer.

The salaries of government officers are specifically provided for by law, and it is a very difficult matter (except as to political officers) to procure readjustment based on altered conditions, or increased responsibilities. So, it not infrequently happens that in some particular service of the government duplicated in kind elsewhere, the promoters offer compensation in harmony with the advanced requirements of such service. There is scarcely a department of the government (notably those employing scientific skill and experience) that does not suffer in competition with local institutions all over the country.

Dr. Hamilton has accepted the position of professor of surgery and surgical pathology in Rush Medical College, Illinois, considered one of the finest in the West in the line of surgery.

Dr. Walter Wayman, a graduate of Amherst College, and for some time chief assistant, has been appointed to succeed Dr. Hamilton.

The marine hospital service for the care of sick and injured American seamen, originated in 1798. It supervises all United States marine hospitals, twenty additional government hospitals, and a large number of relief-stations (about 135) where medical aid is given to seamen of the merchant marine. Officers of the service examine pilots who apply for license; and crews and keepers of life-saving stations. It treats officers and crews of the revenue marine service. It is charged with the management of the eight national quarantine stations, and the execution of rules under the interstate quarantine law recently enacted, and more important still, under the immigration act passed by the last Congress, its medical officers are charged with the inspection of immigrants and with the necessary certification regarding those who are not allowed to enter the country.

The service publishes an annual report, regulations, lists of medical officers, weekly abstract of sanitary reports, and occasionally a paper on some special subject.

IMMIGRATION.—The "Immigration Act," so called, passed at the last session of Congress, established in the Treasury Department the office of superintendent of immigration, and the President is authorized and directed to appoint such superintendent, with the advice and consent of the Senate. The Hon William D. Owen, of Logansport, Indiana, has been appointed to this office. Mr. Owen, who was a member of the 51st Congress, is largely responsible for the passage of this important measure. The act took effect April 1, 1891. It prohibits the landing in the United States of the following classes of aliens:

1. Idiots.
2. Insane persons.
3. Paupers, or persons likely to become a public charge.
4. Persons suffering from a loathsome or dangerous contagious disease.
5. Persons who have been convicted of a felony or other infamous crime or misdemeanor involving moral

turpitude, not including persons convicted of political offenses only.

6. Polygamists.

7. Persons coming under contract to labor.

All corporations and others bringing into the United States aliens, falling within any of the prohibited classes, are required under heavy penalties to return them at their own cost, to the ports or countries whence they came, and this requirement holds good for *one year* after any such prohibited alien may have entered the United States. The "contract to labor" provision does not apply to ministers of any religious denomination, nor to persons belonging to any recognized profession, nor to professors for colleges and seminaries. All alien immigrants upon their arrival must be reported to the proper inspection officers. Medical examinations will be made by the surgeons of the Marine Hospital Service. Decisions made by the inspection officers adverse to the right of the alien to land shall be final, unless appeal be taken to the superintendent, whose action shall be subject to review by the Secretary of the Treasury. Any alien who becomes a public charge within one year after his arrival from causes existing prior to his landing shall be deemed to have come in violation of law, and shall be returned as aforesaid.

The Secretary of the Treasury has appointed a commission to proceed to Europe for the purpose of investigating various aspects of immigration; such as, the reasons for the outpouring from southern Europe, the character of the emigrants, municipal or society aid, whether the deportation of defective classes is encouraged, etc. The commission as at present constituted consists of Dr. Walter Kempster, Judson N. Cross, Joseph Powderly, and H. J. Schulteis, the latter as a representative of the Federation of Labor.

The *Star*, a Washington newspaper conducted with conspicuous ability, advances as an important consideration to account for the large immigration to this country, the fact that the debt of many leading foreign nations is increasing as that of the United States steadily decreases. The tabulated statement prepared by the Census Bureau for the decade of 1880 to 1890 shows that the former has increased more than two thousand million dollars ; the latter has decreased half that amount. The fact that this heavy increase of foreign indebtedness is due largely to preparation for war furnishes a further inducement to seek a land of peace and comparatively small national expenditures. An examination of the per capita debt of the various countries illustrates the comparative statement. The United States debt decreased from $38.33 to $14.63. Great Britain's per capita debt is $87.79 ; that of France $116.35 ; Russia's is only $20.79." (The figures do not help the argument of the *Star*. There is practically no immigration from France.)

EXPLORATIONS IN ALASKA, ETC.—Mr. Israel C. Russell of the United States Geological Survey is the chief of a small party recently sent to Alaska under the auspices of the National Geographic Society to explore further the region about Mt. St. Elias. The Geological Survey, the Revenue Marine Service, the Fish Commission, and the Coast Survey, to the extent of affording facilities at least, are co-operating, so that, utilizing the information derived from last year's experience in the same region, valuable results are confidently expected. In order to have the shortest possible land route, the approach to the country will be from the south by way of Icy Bay instead of from the east by way of Yakutat Bay as last season. This will avoid the loss of much time and energy. The ascent of Mt. St. Elias and study of the unmapped country to the north and west of it are primary objects. Co-relatively will be an examination of the great Malaspina glacier, and a more extended exploration of Yakutat Bay.

Mr. Marcus Baker of the National Geographic Society says that owing to last year's explorations the region between Yakutat Bay and Mount St. Elias had been charted in considerable detail, showing the assemblage of ranges, the association of peaks and the system of glacial formations, all running generally on the west side of the Coast Range down to the sea, or rather to the Malespina glacier.

Mr. Frederick Schwatka, with whom is associated Mr. C. Willard Hayes of the Geological Survey, is now in Alaska surveying the country north of the Mt. St. Elias range, and between the head waters of the Yukon and White Rivers. It is the intention of these gentlemen to ascend the Taku River and then make portages across to the lakes, thence to the head waters of the Yukon and by portage to Copper River, whence they will make their way to the Pacific Ocean.

After Lieut. R. E. Peary had explained to a public audience in Washington recently his projected expedition towards the vague northern limit of Greenland, he was presented with a silk flag of the United States, with the request that when he sets foot upon the farthest north he plant there the banner of his country and then return it to the National Geographic Society. The flag had been placed in the hands of the Society by Miss Ulrica Dahlgren.

The Postmaster-General has authorized the establishment of a very complete mail service with the Territory of Alaska, which will be inaugurated July 1, the contract having been awarded to the North American Commercial Company, San Francisco, which will put on a line of steamers running as far west as Unalaska, touching at all the intermediate ports. The distance from Port Townsend to Unalaska is 2,400 miles and from Sitka to Unalaska 1,300 miles. This service will bring into contact with civilization a vast extent of country, and people who have heretofore been debarred from communication with the United States except by means of a chance sailing vessel.

Apropos of the above, a letter was mailed at Juneau on the 1st of June and reached Washington, D. C., on the 11th of the same month.

INTERCONTINENTAL RAILWAY.—The intercontinental railway commission is an outgrowth of the recent International American Conference. The Commission after a session in Washington of several weeks' duration has adjourned until next February. Its first report has been presented to the Secretary of State. It says : A line of railroad is projected and has been surveyed from the City of Mexico to Ayutla, on the frontier of Guatemala. From Ayutla the line determined upon runs parallel with the Pacific Coast through Mazatenango to Santa Lucia, thence by Cuajiniquilapa to Santa Ana, in Salvador ; thence through Nuevo

San Salvador and San Miguel to Goascoran in Honduras.

From Goascoran the line will continue along the Gulf of Fonseca, through the State of Choluteca to the city of the same name; thence through Chinadega in Nicaragua to Rivas, and along the shore of Lake Nicaragua, through Alajuela in Costa Rica, and on through San José to Puerto Limon, and thence down the isthmus of Panama to the valley of the Atrato in Colombia.

In Colombia the line will cross the western cordillera of the Andes into the valley of the river Cauca and up this valley to Popayan. A trial line for a branch road will be run from the main line to the city of Bogotá.

From Popayan the line will cross the mountains to Pasto, and thence continue through Ecuador by the cities of Tulcan, Ibarra, Quito, Cuenca and Loja and into Peru.

Through Peru the line selected will pass through the provinces of Cajamarca and Amazonas and to the river Marañon, and through its valley to Cerro de Pasco; thence along the river Perene and on to Santa Ana; thence to Cuzco, Santa Rosa and Puno, and along the shore of Lake Titicaca to the Bolivian frontier.

In Bolivia the line will pass through the cities of La Paz and Oruro to Huanchaca, where the main line will terminate. From Huanchaca, Chile, the Argentine Republic, Paraguay and Uruguay can be reached by branch lines.

Venezuela will be connected with the trunk line by a branch from the most suitable point in the valley of the Cauca to Medellin, where it will connect with an existing railroad to the city of Puerto Berrio, on the Magdalena River, and continue through Bucaramanga, San Jose de Cucuta and Merida to Valencia.

It is hoped, the report says, that the work allotted to the several parties can be completed within a year, and the main question as to whether the projected railway is practicable will have been determined.

Letters have been received from the three surveying parties, showing that their destinations have been reached. It is not thought that these parties will get back to this country for over a year.

Information has been received from Buenos Ayres to the effect, that the Trans-Andine railway between Buenos Ayres and Valparaiso is now open for traffic with the exception of the distance between Mendoza and Uspallata, 56 miles. The tunnel through the mountain, 10,500 feet above the sea, is very well along, and is expected to be finished during the present year.

HERNANDO CORTES.—The monument to the conqueror of Mexico was unveiled in his native city of Medellin, Spain, on the 2d of December, 1890. The statue was erected by the municipality, aided by contributions from the Senate and chamber of deputies of Spain. The sculptor is Eugenio Barron. The monument stands in the centre of a square formerly occupied by the Cortes homestead. It stands about ten feet high and represents Cortes in the full military dress of the period, carrying in his right hand the staff of command, and in his left the flag of Castile and Leon. The pedestal is a massive stone structure in the shape of a fifteenth centtury fortress, and bears on its four sides representations of broken Aztec weapons, with the inscription : Mexico, Tlascala, Otumba, Tabasco. On the front of the pedestal appears the name "Hernan Cortes," and the coat of arms which Charles V. granted him on his return from Mexico.

The Department of State has in preparation several valuable reports from American consuls abroad on several specially valuable topics :

Straits and highways of the world.

Canals and navigation in foreign countries.

Tariffs of the world.

Gas and gas manufacture in foreign countries.

Port regulations, light-houses and quarantines of the world.

Coal trade and coal production in Spanish America.

Rubber trade and rubber trees.

Lead and zinc mines and trade.

H.